Krutibash Mohapatra

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Technical Skills/Tools

Programming Languages: Python, Java, JavaScript
Frameworks: ReactJS, NodeJS, ExpressJS, Mongoose, Langchain, Socket.io, FastAPI, REST API
Databases: SQL, PostgreSQL, MySQL, MongoDB
Tools: GitHub, VS Code, Postman, LLMs

Experience

Extracting text from images using Keras and easy OCR
2023 –Feb 2024

XIM University, Bhubaneswar

- **Deep Learning-Based OCR** – Developed an image-based text extraction system using KerasOCR & EasyOCR.
- **Computer Vision Implementation** – Applied CNN-based OCR models for recognising text in diverse images.
- **Dataset Utilization** – Trained & tested models on ICDAR 2013, COCO-TEXT, TotalText, and TextOCR datasets.
- **Accuracy Optimization** – Evaluated model performance across varying text orientations & image complexities.
- **Real-World Accessibility Focus** – Designed with the motivation to empower visually impaired people, enhancing accessibility via text digitisation.

Gray Matter, White Matter and CSF abnormalities in PD: Comparative Analysis of Brain MRIs of PD Patients against Healthy Controls
2023 – Feb 2024

XIM University, Bhubaneswar

- **Neuroimaging and Machine Learning Analysis** – Conducted a voxel-based morphometry (VBM) study on MRI scans to identify structural differences in brain tissue between Parkinson's disease (PD) patients and healthy controls.
- **Advanced-Data Processing** – Segmented and analysed brain tissues using MATLAB & CAT12 in SPM12.
- **Comparative Analysis** – Identified gender-based structural variations in PD progression.
- **Large-Scale Data Handling** – Processed MRI data from 2,206 PD patients & 849 controls (PPMI dataset).
- **Biomarker Identification –** Studied key brain regions for early PD detection & treatment insights.

Projects

Real-time synchronous chat application
Jan 2025 – present

Tech-Stack: Socket.IO, ReactJS, ExpressJS, MongoDB, NodeJS, Mongoose, JWT

- Developed a real-time chat application supporting direct messaging, group chats and file sharing
- Leveraged **JWT** for user **authentication** and **session** management.
- Enabled file uploads and **file sharing**
- Leveraged **Zustand** for global state management

AI-Powered Resume Optimizer
Feb 2025 – present

Tech-Stack: FastAPI, Python, spaCy, PyPDF2, ReactJS, NodeJS, MongoDB, OAuth 2.0

- Built an **AI-powered** resume analysis and optimisation tool that helps candidates tailor their resumes for specific job descriptions.
- Implemented **PDF/DOCX** parsing to extract text and analyse resume content.
- Developed a keyword-matching algorithm using **NLP (spaCy)** to compare resumes against job descriptions, highlighting missing keywords.
- Designed and deployed a secure authentication system using **Google OAuth 2.0** for user login and access management.
- Created an interactive web interface for users to upload resumes, paste job descriptions, and receive real-time insights and improvements.

Education

Bachelor's degree: Computer Science and Engineering
Aug 2020 – Mar 2024

XIM University
Bhubaneswar, India
Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Relational Database Management Systems, Computer Networking, Web Development, Computer Vision and Image Processing, Operating Systems

Certifications & Awards

AWS Technical Essentials — - AWS Nov 2023

Google Data Analytics Professional Certificate — - Coursera Aug 2024

The Complete Full-Stack Bootcamp — - Udemy Nov 2024